

Claims

1. A production installation (1) for utilizing wave energy in which production installation there are two or more production units (4) and the water mass (V) of the water basin is adapted to actuate production units (4) or their parts located at the bottom (P) of the water basin or in close vicinity, and the production units (4) can be used to transform the kinetic energy of the water mass into some other form of energy like electric energy and/or kinetic energy and/or pressure of the intermediate agent,

characterized in that

- the production units (4) are attached directly or indirectly to the bottom of the water basin at intermediate water region (B),
- the production units (4) are totally submerged under water surface,
- the transfer equipment of the energy of the production units (4) or of the intermediate substance is connected in series or parallel in relation to each other.

2. A production installation (1) as defined in claim 1, **characterized** in that the production installation is attached by means of one or more bases (50) to water basin bottom (P).

3. A production installation (1) as defined in claim 2, **characterized** in that some part or all the transfer equipment (2c, 20, 200) of the energy or intermediate substance of the production installation (1) are immovably attached to the bases (50).

4. A production installation (1) as defined in claims 2 – 3, **characterized** in that the bases (50) have the fastening equipment (68) ready for the production units (4) to be attached to them.

5. A production installation (1) as defined in any of the preceding claims, **characterized** in that the energy from the reciprocating movement of a plate-like body (2) or its part in the production units (4) of a production installation (1) can be transformed into kinetic energy and/or pressure of the intermediate substance by means of a piston or torsion pump (6) functionally connected to the plate.

6. A production installation (1) as defined in claim 5, **characterized** in that the liquid or gasiform intermediate substance can be pumped pressurized by a piston or torsion pump (6) to above the water surface or to some other part of the water basin, where it can be used e.g. for the production of compressed air, or of gases,
5 for creating boost pressure, for ornamental water fountains, for impregnation of wood, for aeration of water pools or for separating gasiform substances or it can be used for producing streams of the intermediate liquid substance needed e.g. in the cultivation of sea creatures and water plants or for the ventilation and/or heating and/or cooling of housing or used as such e.g. in irrigation systems, water
10 glides or fire fighting systems.
7. A production installation (1) as defined in claims 1 - 4, **characterized** in that the production units (4) can be used to transform the kinetic energy of the water mass into electric energy and the electric energy can be transferred via wires or cables into the point of application.
- 15 8. A production installation (1) as defined in claim 7, **characterized** in that the point of application for the electric energy is an electric line above the water basin surface with which the electric energy can be transferred to some other point of application.
- 20 9. A production installation (1) as defined in any of the preceding claims, **characterized** in that the production units (4) are attached to the bottom (P) of the water basin so as to be totally located at a depth where the movement of the water mass is substantially reciprocating or elliptic.
- 25 10. A production installation (1) as defined in any of the preceding claims, **characterized** in that the production units (4) are attached to the bottom (P) of the water basin to a depth deeper than the wave breaking line, roughly in an area where the ratio of the depth of the water basin H to the wavelength L is in the range from $1/20$ - $1/2$.